Hanson Packed Products
Lime Putty
Technical Data Sheet

DESCRIPTION

Hanson Lime Putty is a stiff paste composed of a finely divided colloidal dispersion of slaked lime in water. It is available in 17 litre tubs.

On opening the container, a little water may be seen on the top of the putty. This is not detrimental to the product and prevents carbonation from taking place during storage. It should be kept for tempering the mortar or for adding back to the tub before resealing. Lime putty hardens by absorbing carbon dioxide from the atmosphere, which converts the lime to calcium carbonate. The hardening process is slow and allows some movement in a structure to be accommodated before the final set is obtained.

APPLICATIONS

Hanson Lime Putty is recommended for mixing with clean, well graded sands in the production of mortars, renders and plasters that are ideal for conservation, restoration and new build applications.

Hanson Lime Putty is a fat lime which will carry up to three times its volume of clean, well graded sand below a size of 5 mm. Gauging should always be carried out by volume and no further water needs to be added. Adequate mixing is essential to ensure that full workability of the mix is achieved. Pozzolanic and other agents may be added to increase the speed of set. However, initial trials should be carried out to determine the correct addition rates.

Hanson Lime Putty may be added, in small amounts, to hydraulic lime mortars and renders to improve their plasticity. Initial trials should be carried out to determine optimum proportions and their effect on the hardened product.

Hanson Lime Putty may be thinned down using water, with or without the addition of pigments for making brushable lime washes.

QUALITY

Hanson Lime Putty is classified as BS EN 459-1 CL 90 Lime Putty.

Typical Properties	
Calcium Hydroxide	92.5%
Calcium Carbonate	4.0%
Insoluble	3.0%
Magnesia	0.05%
pH	13
Bulk density	1220 – 1320kg/m3

STRENGTH

High strength is not normally required or desired of building mortar, renders or plasters. An unnecessarily strong mortar will concentrate the effects of any differential movement between the mortar and the masonry which could lead to cracking, reducing durability and increasing the risk of rain penetration.

A weaker mortar will accommodate some differential movement between the mortar and the masonry and if cracking does occur it will generally be distributed as fine hairline cracks, thus preserving the integrity of the building.

Hanson Lime Putty has no hydraulic properties and stiffens initially by the loss of moisture from the mix by evaporation and absorption. It is therefore important that consideration is given to providing adequate protection for the work in wet or cold weather. The hardening of lime putty mortars is due to the lime reacting with the carbon dioxide in the atmosphere that converts the lime to calcium carbonate. This hardening process is slow and will not provide immediate strength.

MORTAR MIX DESIGN

Hanson Lime Putty is usually proportioned with 2 1/2 - 3 parts by volume of clean well graded sand, the lime putty filling the spaces between the sand particles without adding to the overall volume, so the volume of lime mortar is equal to the volume of the sand used. No additional water is usually required by the mix as the required workability can normally be achieved by adequate mixing of the mortar.

STORAGE

Hanson Lime Putty should be stored under cool, frost free conditions. This is necessary as the water in the putty freezes in temperatures below 0°C, and could lead to separation. Part used tubs should have the surface water returned and the lids tightly sealed to prevent carbonation.

ADDITIONS

Additions of pozzolanic materials such as crushed brick dust, BS EN 450 Fly Ash, ground granulated blastfurnace slag or metakaolin can improve the rate of setting of lime putty mortars. It is recommended that trial mixes be produced to establish the optimum properties for any particular application.

CONDITIONS OF USE

- As a general rule, the product should be placed within the range of 10°C to 30°C.
- In cold weather, setting times may be extended and strength development delayed.
- Hanson Cement cannot be held responsible for poor workmanship.
- To avoid premature deterioration please follow the correct storage requirements.

TECHNICAL SUPPORT

For further advice please contact Hanson Cement's Technical Helpline on 0330 123 2441.

HEALTH AND SAFETY

Lime causes skin, eye and respiratory irritation, severe burns and dermatitis. Always wear suitable personal protective equipment (PPE) and refer to the full Material Safety Data Sheet for further information.

For further information contact:

Hanson Cement
Ketton
Stamford
Lincolnshire
PE9 3SX

Hanson.co.uk

Customer Services:

Tel: 0330 123 4525

Email: cement@hanson.com